

REMARKS

Claim 1 has been amended and claim 3 has been canceled. Claims 1, 2 and 16-18 are pending in the application. Support for the amendment is found throughout the specification. No new matter has been added to the amendment.

Claims 1-3, 16-18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kajiyama et al. (U.S. Patent No. 6,346,383, issued 12 February 2002) in view of Mitsuhashi (WO 00/69561, published 23 November 2000) and St. George (PCR: Running Hot and Fast, Science, Statistical Software Supplement, 27 February 1997) and www.labtrade.com. Applicant respectfully traverses this rejection.

The Examiner admits that Kajiyama and Mitsuhashi do not teach a heat block with holes for tubes and a nucleic acid array substrate, but argues that St. George "teaches a thermocycler (PTC 200 DNA Engine) that holds multiple dual-mode inserts so as to accommodate any PCR application 'the world has to offer.'" However, the present invention employs in the hybridization reaction of DNA chips a heat block which is used in the PCR reaction. Thus, the invention discloses a specific application and does not aim at realizing dual-mode of any PCR application as disclosed by St. George.

In addition, none of the cited references disclose the invention as set forth in amended claim 1, wherein the heat conduction member is formed of a resin or composite of metal and resin for improving the close contact (adhesion) with holes for microtubes and for achieving the reduction in cost and weight of the reaction unit. Therefore, applicant respectfully submits that there is no motivation to combine the

references cited by the Examiner to obtain the claimed invention with a reasonable expectation of success and respectfully requests that the Examiner withdraw the rejection and allow the claims.

Claims 1-3, 16-18 were also rejected under 35 U.S.C. 103(a) as being unpatentable over Kain et al. (U.S. Patent Application No. 2002/0039728, filed 12 February 2001) in view of St. George (PCR: Running Hot and Fast, Science, Statistical Software Supplement, 27 February 1997) and www.labtrade.com. Applicant respectfully traverses this rejection.

The Examiner again admits that Kain does not teach a substrate having both holes for tubes and a probe array and relies on St. George for the missing claim element. However, as set forth above, there is no motivation for a person of ordinary skill in the art to apply the teaching of St. George to the device of Kain with a reasonable expectation of success. Nor do any of the cited references teach that the heat conduction member is formed of a resin or a composite of a metal and resin as set forth above. Therefore, in view of the amendment of claim 1, applicant respectfully requests that the Examiner withdraw the rejection and allow the claims.

Applicant has not independently addressed the rejections of the dependent claims. Applicant submits that, in view of the amendments to the claims presented herein and, for at least similar reasons as to why the independent claims from which the dependent claims depend are believed allowable as discussed supra, the dependent claims are also allowable. Applicant however, reserves the right to

address any individual rejections of the dependent claims should such be necessary or appropriate.

CONCLUSION


For the above-stated reasons, this application is respectfully asserted to be in condition for allowance. An early and favorable examination on the merits is requested. In the event that a telephone conference would facilitate the examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 13-4500, ORDER NO. 1232-5069.

Respectfully submitted,
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